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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,664

12/10/2003

Douglas T. Gjerde

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PHYNEXUS, INC.

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SAN JOSE, CA 95136

EXAMINER

HYUN, PAUL SANG HWA

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/733,664	Applicant(s) GJERDE ET AL.	
	Examiner PAUL S. HYUN	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7-11,15-20,23,25,27-29 and 31-38 is/are pending in the application.
- 4a) Of the above claim(s) 17-20,23,25 and 27-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-11,15,16 and 31-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action filed on October 20, 2008 is persuasive and, therefore, the finality of that action is withdrawn. Specifically, Applicant's argument that the disclosure of Le Febre et al. reference relied upon by the examiner was misconstrued is persuasive.

The amended Specification filed by Applicant to correct a typographical error has been acknowledged.

The amendment to the independent claims 1, 2, dependent claim 31, and the addition of new claim 38 have been acknowledged.

In summary, claims 1, 2, 7-11, 15-20, 23, 25 and 27-29 and 31-38 are currently pending with claims 17-20, 23, 25 and 27-29 being withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims **1, 2, 7-9, 11, 31, 34, 35 and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao et al. (US 2002/0164824 A1) in view of Henry et al. (US 2002/0176800 A1).

Xiao et al. disclose an array of capillary tubes, each capillary tube having a first end, a second end, and an inner surface having extraction agents immobilized thereto (see Abstract and Fig. 1). The extraction agents (e.g. proteins and antibodies (see [0084])) are configured to bind specific biomolecules (e.g. proteins, virus (see [0168])). The capillary tube disclosed by Xiao et al. differs from the claimed invention in that Xiao et al. do not disclose that the capillary tube is coiled.

Henry et al. disclose a capillary for conducting liquid chromatography wherein the capillary is coiled or spiral in shape (see Abstract). The coil radius of the capillary can be 1 cm (see [0033]). The reference discloses that the coiling consolidates the lengths of capillaries into small spaces for convenient shipping and temperature control (see [0008]). In light of the disclosure of Henry et al., it would have been obvious to coil the capillary disclosed by Xiao et al. having a coil radius of 1 cm.

Claim **10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao et al. in view of Henry et al. as applied to claims 1, 2, 7-9, 11, 31, 34, 35 and 38 and further in view of Smith et al. (US 4,569,794).

Neither Xiao et al. nor Henry et al. disclose the use of metal ions to bind analytes.

Smith et al. disclose the well-known method of immobilized metal ion affinity chromatography (IMAC) (see lines 5-20, col. 1). The reference discloses that IMAC uses immobilized metal ions to bind proteins. In light of the disclosure of Smith et al., it would have been obvious to one of ordinary skill in the art to use metal ions as the antibodies in the modified Xiao et al. capillary to bind proteins that have affinity towards the metal ions.

Claims **15, 16, 32, 33, 36 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao et al. in view of Henry et al. as applied to claims 1, 2, 7-9, 11, 31, 34, 35 and 38, and further in view of Kumar et al. (US 5,976,896).

Although Xiao et al. disclose that fluid movement through the capillary can be facilitated by a pump (see [0110]), neither Xiao et al. nor Henry et al. disclose the use of a syringe pump.

Kumar et al. disclose the use of a syringe pump to move fluid through a capillary for purposes of conducting immunoassay (see example 12, col. 44). In light of the disclosure of Kumar et al., it would have been obvious to provide the modified Xiao et al. apparatus with a syringe pump to facilitate fluid movement through the capillary.

Response to Arguments

Applicant's argument with respect to the Le Febre et al. reference has been fully considered and it is persuasive. Upon review of the reference, the Examiner agrees with

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Applicant that the passage of Le Febre et al. relied upon in the rejection is directed towards the dimensions of the tube itself, not the coil. Therefore, the reference is no longer applicable and the rejection citing the reference has been withdrawn. However, upon further search and consideration, new grounds of rejection have been made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL S. HYUN whose telephone number is (571)272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul S Hyun/
Examiner, Art Unit 1797

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797

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